

BOOK REVIEWS

URINE AND URINARY SEDIMENT—A Practical Manual and Atlas—Richard W. Lippman, B.S., M.D., Research Associate, Institute for Medical Research, Cedars of Lebanon Hospital, Los Angeles. Charles C. Thomas, Publisher, Springfield, 1952. 124 pages, 61 figures, 56 in color. \$7.50.

As stated in the author's foreword, the principal original contribution of this monograph lies in the presentation of a number of photographic reproductions in color of the urinary sediment. These reproductions should prove highly valuable in the teaching of medical students and laboratory technicians, while more experienced microscopists would do well to examine the figures carefully for what might be thought of as a postgraduate correspondence course. The author also performs the badly needed service of bringing up to date the methods for performing the "Addis Count" in a simple fashion, and in general adheres to the methods and interpretations of Thomas Addis (with whom he worked). In addition, one finds both theoretical and practical information on proteinuria and many other urinary abnormalities; a large section is devoted to details of technique in virtually every test performed on urine in clinical laboratories. The monograph also contains systematic discussions of the formed elements in the sediment and of urinary findings in disease. The work should find a place in every laboratory of clinical pathology and school of medicine.

* * *

HUMAN BIOCHEMISTRY—3rd Edition—Israel S. Kleiner, Ph.D., Professor of Biochemistry and Director of the Department of Biochemistry, New York Medical College. 83 illustrations and five color plates. The C. V. Mosby Company, St. Louis, 1951. 695 pages. \$7.00.

Kleiner's volume on Human Biochemistry appears to be an acceptable textbook of the subject on the undergraduate level. It is simple and direct in presentation. The text is arranged in the usual descriptive format with emphasis placed on the historical development and significance of the topics. The subject matter of the various chapters is introduced in a matter of fact manner without adequate reference to basic biologic and clinical principles. The chapters dealing with applied biochemistry, especially in regard to the physiology of digestion, vitamins and foods, are good. There is an excellent chapter on the composition and nutritive importance of milk. The chapters on mineral metabolism and the urine constitute excellent introductions into the subject matter of these two important phases of biochemistry. The section on blood, as well as that on hormones, could have been broadened with profit. Some of the illustrative clinical material could have been deleted with advantage. The bibliography appended to each chapter is relatively complete. On the whole the book is commendable for the purposes of the author.

* * *

SPATIAL VECTOR ELECTROCARDIOGRAPHY — Clinical Electrocardiographic Interpretation—Robert P. Grant, M.D., and E. Harvey Estes, Jr., M.D. The Blakiston Company, Philadelphia, 1951. 149 pages. \$4.50.

This original and interesting book presents a clinical method for interpreting in vector rather than scalar form the standard and unipolar electrocardiographic leads customarily used today. The coverage of the subject is not meant to be complete—only the normal and certain abnormal conditions of the ventricles are discussed. The introductory chapters are concerned with explaining in a general way

the application of vector principles to the electrical activity of the heart. The authors have carefully avoided highly technical terminology and have succeeded in presenting their material in an unusually well-written, simple style. The interrelations between the standard and unipolar limb leads and the feeling for the three-dimensional quality of the heart's electrical field are particularly well expressed. The unwary might have difficulty in separating fact from hypothesis at times due to the simple dogmatic style which contributes so much to the clarity of the presentation. There are several warnings about this in the text itself, however.

The method recommended for the actual interpretation of electrocardiograms is not such a happy proposition, unfortunately. The present method involves over-simplifications which lead to serious inaccuracies. The interpretations are mainly based on the determination of the spatial orientation of "mean QRS and T vectors." These mean spatial vectors are determined by a method which is reliable only when the corresponding actual vectorcardiographic QRS and T loops are roughly elliptical in shape with the isoelectric point quite near one end of the ellipse. Frequently this is not the case, particularly with abnormal loops, but one cannot readily determine the existence of this condition just from studying the electrocardiogram. To discover it one must resort to actual vectorcardiography or to the same tedious plotting methods which have spoiled the clinical usefulness of previously published methods for deriving vectorcardiograms from electrocardiographic leads.

It is very unfortunate that the authors did not check their findings against the results of actual vectorcardiographic study of their case material before publishing this book. They might have avoided such pitfalls as the omission of the important concept that not only the stressed "dead zone 0.04 vector" is important in the detection of myocardial infarction but that significant spatial shifts of the entire QRS loop occur, the rather incomplete and somewhat inaccurate discussion of the differentiation of left ventricular hypertrophy from left bundle branch block (p. 73), and the unsatisfying explanation offered for the "isolated T negativity" phenomenon (p. 47). In explaining the last, the authors suddenly abandon all the vector theory they had previously expounded; one wonders if the phenomenon doesn't result merely from the existence of a non-elliptical T loop. The precordial leads are used without much allowance being made for the fact that they do not lie strictly in the horizontal plane and lie at different distances from the heart. As a result, the increased voltages found in these leads are uncontrolled, the closer areas of the heart being unduly represented. Because of this one must remember that the spatial angle data presented cannot be compared precisely with information derived from actual vectorcardiography.

Nevertheless, much of what was written seems sound, and the many practical applications of vector principles are thought-provoking and enlightening. The book is a fecund source of ideas that deserve further experimental exploration. In summary, the book can be highly recommended as one of very few lucid, non-technical expositions of the application of vector principles to the electrical activity of the heart; as a clinical method for assisting in the interpretation of electrocardiograms it has considerable merit but too many faults to be generally useful. Those interested in investigating this aspect of the subject further would probably do better to turn to vectorcardiography.